Multislice Ct Medical Radiology

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Multislice CT

The topic of this book is the use of scintillating materials in the detection of ionising radiation for medical imaging. The text surveys the state of the art in radiation detectors for medical imaging, followed by an in-depth review of all aspects of the use of scintillating materials. Also included are detailed discussion of ways to improve the performance of existing scintillating materials and completely novel uses of scintillating materials.

3D Image Processing

CT of the Acute Abdomen provides a comprehensive account of the use of CT in patients with acute abdomen. Recent important developments in CT, including multislice CT and multiplanar reconstructions, receive particular attention. CT features are clearly illustrated, and pitfalls and differential diagnoses are discussed. The first section of the book presents epidemiological and clinical data in acute abdomen. The second and third sections document the key CT findings and their significance and discuss the technological background. The fourth and fifth sections, which form the main body of the book, examine in detail the various clinical applications of CT in nontraumatic and traumatic acute abdomen. This book will serve as an ideal guide to the performance and interpretation of CT in the setting of the acute abdomen; it will be of value to all

general and gastrointestinal radiologists, as well as emergency room physicians and gastrointestinal surgeons.

Multi-slice CT in Cardiac Imaging

Topics include: Pediatric Stroke; Stroke Mimics; Intracranial Hemorrhage; Transient Ischemic Attack; Intensive Care Management of Acute Ischemic Stroke; Endovascular and Neurosurgical Management of Acute Ischemic Stroke; Intravenous Thrombolysis in Acute Ischemic Stroke; Vertigo, Vertebrobasilar Disease and Posterior Circulation Ischemic Stroke; and Neuroimaging in Acute Stroke.

Multislice CT

This book offers a comprehensive overview of the forensic and radiological aspects of pathological findings, focusing on the most relevant medico-legal issues, such as virtual autopsy (virtopsy), anthropometric identification, post-mortem decomposition features and the latest radiological applications used in forensic investigations. Forensic medicine and radiology are becoming increasingly relevant in the international medical and legal field as they offer essential techniques for determining cause of death and for anthropometric identification. This is highly topical in light of public safety and economic concerns arising as a result of mass migration and international tensions. The book discusses the latest technologies applied in the forensic field, in particular computed tomography and magnetic resonance, which are continuously being updated. Radiological techniques are fundamental in rapidly providing a full description of the damage inflicted to add to witness and medical testimonies, and forensic/radiological anthropology supplies valuable evidence in cases of violence and abuse. Written by international experts, it is of interest to students and residents in forensic medicine and radiology. It also presents a new approach to forensic investigation for lawyers and police special corps as well as law enforcement agencies.

Machine Learning in Medical Imaging

A Doody's Core Title 2012 New applications of echocardiography, nuclear magnetic resonance, cardiovascular magnetic resonance, and cardiac computed tomography are rapidly developing and it is imperative that trainees and practitioners alike remain up to date in the latest developments. It is becoming increasingly difficult to remain abreast of these advances in each individual modality and thus it is no longer practical to focus on one at a time. In addition, training guidelines are changing and multimodality training has become the norm. Multimodality Imaging in Cardiovascular Medicine presents a clear and in-depth review of the available technologies and evidence supporting their appropriate clinical applications. Hundreds of outstanding images are included to support and augment the discussions from the leading experts in each

modality. For maximum clinical value, rather than organize the content by imaging modality, the book is organized by disease so that the reader can utilize the book in real-time problem solving and decision making in daily clinical practice. Features of Multimodality Imaging in Cardiovascular Medicine Include More than 350 multimodality imaging examples of cardiovascular pathophysiology Corresponding text places the images into context at the interface with patient care State-of-the-art chapters contributed by the leading imaging experts

CT and MRI of the Whole Body

The fourth edition of this well-received book offers a comprehensive update on recent developments and trends in the clinical and scientific applications of multislice computed tomography. Following an initial section on the most significant current technical aspects and issues, detailed information is provided on a comprehensive range of diagnostic applications. Imaging of the head and neck, the cardiovascular system, the abdomen, and the lungs is covered in depth, describing the application of multislice CT in a variety of tumors and other pathologies. Emerging fields such as pediatric imaging and CT-guided interventions are fully addressed, and emergency CT is also covered. Radiation exposure, dual-energy imaging, contrast enhancement, image postprocessing, CT perfusion imaging, and CT angiography all receive close attention. The new edition has been comprehensively revised and complemented by contributions from highly experienced and well-known authors who offer diverse perspectives, highlighting the possibilities offered by the most modern multidetector CT systems. This book will be particularly useful for general users of CT systems who wish to upgrade and enhance not only their machines but also their knowledge.

Multislice-CT of the Abdomen

Now more streamlined and focused than ever before, the 6th edition of CT and MRI of the Whole Body is a definitive reference that provides you with an enhanced understanding of advances in CT and MR imaging, delivered by a new team of international associate editors. Perfect for radiologists who need a comprehensive reference while working on difficult cases, it presents a complete yet concise overview of imaging applications, findings, and interpretation in every anatomic area. The new edition of this classic reference — released in its 40th year in print — is a must-have resource, now brought fully up to date for today’s radiology practice. Includes both MR and CT imaging applications, allowing you to view correlated images for all areas of the body. Coverage of interventional procedures helps you apply image-guided techniques. Includes clinical manifestations of each disease with cancer staging integrated throughout. Over 5,200 high quality CT, MR, and hybrid technology images in one definitive reference. For the radiologist who needs information on the latest cutting-edge techniques in rapidly changing imaging technologies, such as CT, MRI, and PET/CT, and for the resident who needs a comprehensive resource that gives a broad overview of CT and MRI capabilities. Brand-new team of new

international associate editors provides a unique global perspective on the use of CT and MRI across the world. Completely revised in a new, more succinct presentation without redundancies for faster access to critical content. Vastly expanded section on new MRI and CT technology keeps you current with continuously evolving innovations.

Radiology in Forensic Medicine

With the advent of multidetector-row technology, excitement has returned to computed tomography. Not only can we now image faster and with better resolution than ever before. More importantly, the development of sophisticated image acquisition techniques has enabled us to venture into areas previously considered to be beyond the scope of CT imaging. The knowledge, experience, and vision of a host of renowned international experts in cutting-edge thoracic applications of multidetector-row CT are condensed within this book. The result is a critical, comprehensive review of the novel opportunities, but also the new challenges, brought about by the development of ever-faster CT acquisition techniques. Presents the latest developments in CT imaging of the thorax Comprehensively reviews the literature Offers useful practical guidelines Addresses both opportunities and challenges Written by leading international experts

Machine Learning in Computer-Aided Diagnosis: Medical Imaging Intelligence and Analysis

This book explains the mathematical and physical principles of medical imaging and image processing. Beginning with an introduction to digital image processing, it goes on to cover the most important imaging modalities in use today: radiography, computed tomography, magnetic resonance imaging, ultrasonic imaging and nuclear medicine imaging. Each chapter includes a short history of the imaging modality, physics of the signal and its interaction with tissue, image formation or reconstruction process, image quality, different types of equipment, examples of clinical applications, biological effects, safety issues, and future expectations. The remainder of the book deals with image analysis and visualization for diagnosis, therapy, and surgery after images are available. A CD packaged with the book includes the text, all the images in color, and some animated images. Both students and beginning biomedical engineers will welcome this well-balanced, copiously illustrated treatment of medical imaging.

Multislice CT

Whole body computed tomography has developed at a rapid pace in the past decade, spurred on by the introduction of spiral and multislice scanning. These new technologies have not only improved diagnostic accuracy, but also made new applications possible that were previously accessible only through more complex or invasive techniques.This new book expertly fills a gap in the literature by combining the practically relevant technical background with the clinical information

required for correctly performing and interpreting CT examinations. The book presents the state-of-the-art capabilities and requirements of CT as a key diagnostic and interventional tool, with special emphasis on the role of spiral and multi-slice CT. You will find a thorough introduction to CT technology from scanner design to 3D image reconstruction, useful practical hints on how to optimize your examination protocols and how to keep the radiation exposure of your patients to a minimum, as well as an extensive clinical section in which symptoms, pathology and CT morphology are integrated to provide you withthe basis for subtle interpretation of CT findings using the most modern CT techniques.Highlights include:- Full coverage of single-slice, 4-slice and 16-slice scanning techniques- Introduction to extended CT applications including cardiac CT,CT fluoroscopy,and 3D image processing- Organ-specific protocols for scanning and contrast administration- Practical guidelines for maximizing image quality and minimizing radiation exposure- Useful suggestions for image interpretation and for avoiding pitfalls and errors- Convenient format by organ systemand disease entity- Full discussion of organ-specific pathology and CT morphology- CT indications integrated with other imaging modalitiesAt a time when CT examinations are becoming more technically demanding and complex, with an increasing number of scan parameters and advances in 3D reconstructions, this book is an essential professional tool. Experienced practitioners will find their diagnostic and technical skills improved by reading the book, and beginners will enjoy the clear, systematic approach that will help them use the technique with confidence.

Clinical PET-CT in Radiology

Few fields have witnessed such impressive advances as the application of computer technology to radiology. The progress achieved has revolutionized diagnosis and greatly facilitated treatment selection and accurate planning of procedures. This book, written by leading experts from many different countries, provides a comprehensive and up-to-date overview of the role of 3D image processing. The first section covers a wide range of technical aspects in an informative way. This is followed by the main section, in which the principal clinical applications are described and discussed in depth. To complete the picture, the final section focuses on recent developments in functional imaging and computer-aided surgery. This book will prove invaluable to all who have an interest in this complex but vitally important field.

Oral Radiology - E-Book

This second revised edition of Multislice CT provides a comprehensive overview of the clinical application of this exciting technique, following the introduction of the newest generation of multi-detector row CT scanners. An initial section considers technical aspects and issues, including those relating to radiation dose and use of contrast material. Thereafter the focus is on the diagnostic applications of multislice CT in each of the most important anatomical regions. Examinations of the abdomen, head and neck, brain, chest, and blood vessels are individually described and illustrated, due attention

being paid to the special scanner settings necessary in each case. Practical guidelines to the performance of a successful investigation are provided, and each chapter also reviews the most recently published literature. This comprehensive book will be an invaluable asset to radiologists at all levels.

Protocols for Multislice CT

A team of international experts provides a hands-on, evidence-based overview of the latest clinical applications of multislice computed tomography. Each chapter begins with standard examination protocols for a particular body area and then provides detailed explanations of the key parameter choices for each scanner type - with supportive data from the available literature, wherever possible. The result is today's state-of-the-art definitive guide to the cost-effective use of this revolutionary new technology. Offers a complete overview of the most important applications of multislice computed tomography for all body areas. Organizes information in a head-to-toe format, making guidance quick and easy to find. Features abundantly illustrated guidance with many color 3-D images. Presents up-to-date coverage based upon the most recent technology, from 4-row to 64-row CT systems. Includes the latest information on contrast agents and equipment protocols. Also includes Multislice CT Angiography, the most advanced technique in vascular imaging. Covers the latest interventional procedures guided by MSCT.

Acute Ischemic Stroke, An Issue of Emergency Medicine Clinics - E-Book

Physics for Diagnostic Radiology, Second Edition is a complete course for radiologists studying for the FRCR part one exam and for physicists and radiographers on specialized graduate courses in diagnostic radiology. It follows the guidelines issued by the European Association of Radiology for training. A comprehensive, compact primer, its analytical approach deals in a logical order with the wide range of imaging techniques available and explains how to use imaging equipment. It includes the background physics necessary to understand the production of digitized images, nuclear medicine, and magnetic resonance imaging.

Fundamentals of Body CT

Until recently, CT scanner performance was limited by a series of compromises. With single-detector scanners, one cannot select thin collimation and still maintain the required extent of volumetric coverage. Slow scans cause motion artifacts that impair image quality. The introduction of multidetector CT technology, however, has revolutionized the field. Currently multidetector, multislice CT scanners acquire up to four channels of data from interweaving spirals. The minimum gantry rotation period is as low as half of a second. This increased scan speed allows for thinner collimation and thus higher

longitudinal or z-axis resolution in comparison with single-detector CT. The improved image quality with multidetector technology leads to new applications of CT, particularly in cardiac, vascular, and abdominal imaging. On-going clinical studies are evaluating the suitability of this new imaging tool for non-invasive screening and diagnosis of coronary artery disease. A particular advantage to the increased scan speed in vascular imaging is the ability to cut intra venous contrast dosage and still maintain peak enhancement CT throughout the entire acquisition. Thin-section, multiphasic acquisition during optimal arterial-phase and venous-phase enhan cement significantly improves the accuracy for small lesion and vessel detection, and enhances overall classification of abdominal neoplasms. On the other hand, the increasingly large volume data sets force to new ways of looking at, presenting, storing, and trans ferring images. Networking and two- and three dimensional data processing are the key words.

Machine Learning in Medical Imaging

This book discusses the state-of-the-art developments in multi-slice CT for cardiac imaging as well as those that can be anticipated in the future. It is a comprehensive work covering all aspects of this technology from the technical fundamentals to clinical indications and protocol recommendations. This second edition draws on the most recent clinical experience obtained with 16- and 64-slice CT scanners by world-leading experts. The book also has chapters on area-detector CT and the brand new dual-source CT.

Khan's The Physics of Radiation Therapy

The updated 5th edition of this easy-to-read, comprehensive resource is now in full color to provide you with enhanced understanding of this highly visual field. Clinically focused, it provides quick access to step-by-step descriptions of all MR and CT imaging applications in every anatomic area, with particular emphasis on the revolutionary multislice CT. Use the latest sectional imaging approaches to accurately diagnose a full range of conditions. Any radiologist will find this book indispensable for CT and MR imaging. Includes both MR and CT so you can see correlated images for all areas of the body. Covers interventional procedures to help you apply image-guided techniques. Presents material with a practical, clinical focus, featuring clinical manifestations for most entities. Shows you how to interpret findings from the latest cutting-edge techniques-multislice CT, 3-Tesla MRI, PET/CT, and more. Presents new-generation multislice CT images throughout the book to help you interpret findings from this revolutionary new imaging modality. Includes a completely updated image-guided interventions chapter, plus five new chapters-Liver Transplants; Male Pelvis; Female Pelvis; Evaluation of the Airway; and Contrast Nephrology-to keep you up to speed on the latest approaches. Features a new full-color format for a more user-friendly resource. Provides digital-quality images throughout for enhanced detail.

Radiation Dose from Adult and Pediatric Multidetector Computed Tomography

This is the second, revised edition of the very successful volume on multislice CT published only 2 years ago. A second edition became necessary so swiftly due to the rapid technical developments in multi-detector row technology; a huge amount of new experimental and clinical data has recently become available. This book is the most comprehensive up-to-date work on all aspects of the clinical applications of this fascinating imaging technique. It contains information on the very latest developments in the field, as well as numerous superb illustrations. I am very much indebted to the editors of this volume, M. F. Reiser, M. Takahashi, M.Modic and C.R.Becker - all renowned international experts in computer tomogra phy - for the immense dedication and tireless effort involved in preparing and editing this superb volume in a record brief period of time. I would like to congratulate the editors and the contributing authors, all selected for their exceptional expertise, on the outstanding quality of the different chapters and the wide range of topics covered.

Multislice CT

Expand your understanding of the physics and practical clinical applications of advanced radiation therapy technologies with Khan's The Physics of Radiation Therapy, 5th edition, the book that set the standard in the field. This classic full-color text helps the entire radiation therapy team—radiation oncologists, medical physicists, dosimetrists, and radiation therapists—develop a thorough understanding of 3D conformal radiotherapy (3D-CRT), stereotactic radiosurgery (SRS), high dose-rate remote afterloaders (HDR), intensity modulated radiation therapy (IMRT), image-guided radiation therapy (IGRT), Volumetric Modulated Arc Therapy (VMAT), and proton beam therapy, as well as the physical concepts underlying treatment planning, treatment delivery, and dosimetry. In preparing this new Fifth Edition, Dr. Kahn and new co-author Dr. John Gibbons made chapter-by-chapter revisions in the light of the latest developments in the field, adding new discussions, a new chapter, and new color illustrations throughout. Now even more precise and relevant, this edition is ideal as a reference book for practitioners, a textbook for students, and a constant companion for those preparing for their board exams. Features Stay on top of the latest advances in the field with new sections and/or discussions of Image Guided Radiation Therapy (IGRT), Volumetric Modulated Arc Therapy (VMAT), and the Failure Mode Event Analysis (FMEA) approach to quality assurance. Deepen your knowledge of Stereotactic Body Radiotherapy (SBRT) through a completely new chapter that covers SBRT in greater detail. Expand your visual understanding with new full color illustrations that reflect current practice and depict new procedures. Access the authoritative information you need fast through the new companion website which features fully searchable text and an image bank for greater convenience in studying and teaching. This is the tablet version which does not include access to the supplemental content mentioned in the text.

Computed Tomography and Magnetic Resonance of the Thorax

With more than 1,000 high-quality radiographs and illustrations, this bestselling book visually demonstrates the basic principles of oral and maxillofacial radiology as well as effective clinical application. You'll be able to diagnose and treat patients effectively with the coverage of imaging techniques, including specialized techniques such as MRI and CT, and the comprehensive discussion of the radiographic interpretation of pathology. The book also covers radiation physics, radiation biology, and radiation safety and protection — helping you provide state-of-the-art care! A consistent format makes it easy to follow and comprehend clinical material on each pathologic condition, including a definition, synonyms, clinical features, radiographic features, differential diagnosis, and management/treatment. Updated photos show new equipment and radiographs in the areas of intraoral radiographs, normal radiographic anatomy, panoramic imaging, and advanced imaging. Updated Digital Imaging chapter expands coverage of PSP plates and its use in cephalometric and panoramic imaging, examining the larger latitudes of photostimulable phosphor receptors and their linear response to the five orders of magnitude of x-ray exposure. Updated Guidelines for Prescribing Dental Radiographs chapter includes the latest ADA guidelines, and also discusses the European Guidelines. Updated information on radiographic manifestations of diseases in the orofacial region includes the latest data on etiology and diagnosis, with an emphasis on advanced imaging. Expert contributors include many authors with worldwide reputations. Cone Beam Computed Tomography chapter covers machines, the imaging process, and typical clinical applications of cone-beam imaging, with examples of examinations made from scans. Evolve website adds more coverage of cases, with more examples of specific issues.

CT of the Heart

Cardiac diseases and in particular coronary artery disease are the leading cause of death and morbidity in the industrialized countries. The development of reliable cardiac imaging techniques is considered a key issue in improving patient care. This book presents and discusses the technical concepts, the potential spectrum of applications and the future perspectives of multi-slice CT in cardiac imaging. The discussion is based on the experience of internationally leading clinical institutions. It shows that this new modality has the potential to become an important and robust tool for non-invasive and early diagnosis of cardiac diseases.

Protocols for Multislice CT

Covers the most recent advances in CT technique, including the use of multislice CT to diagnose chest, abdominal, and musculoskeletal abnormalities, as well as the expanded role of 3D CT and CT angiography in clinical practice. Highlights the information essential for interpreting CTs and the salient points needed to make diagnoses, and reviews how the anatomy of every body area appears on a CT scan. Offers step-by-step instructions on how to perform all current CT techniques. Provides a survey of major CT findings for a variety of common diseases, with an emphasis on those findings that help to

differentiate one condition from another.

CT of the Acute Abdomen

Multislice technology has made it possible to investigate large sections of the human body in a very short time. The 4- and 16-row systems currently available necessitate the use of new protocols, which are proposed herein. In a convenient double-page layout, this book provides structured information on all routine protocols to be used for multislice CT. The volume covers all investigations of the brain, neck, lung and chest, abdomen and the periphery, as well as special protocols for the heart, for CT angiography and for CT-guided interventions. Each protocol is displayed en bloc, enabling rapid appreciation of the scanner settings and the indications.

Imaging of the Spine E-Book

Covering the basics of X-rays, CT, PET, nuclear medicine, ultrasound, and MRI, this textbook provides senior undergraduate and beginning graduate students with a broad introduction to medical imaging. Over 130 end-of-chapter exercises are included, in addition to solved example problems, which enable students to master the theory as well as providing them with the tools needed to solve more difficult problems. The basic theory, instrumentation and state-of-the-art techniques and applications are covered, bringing students immediately up-to-date with recent developments, such as combined computed tomography/positron emission tomography, multi-slice CT, four-dimensional ultrasound, and parallel imaging MR technology. Clinical examples provide practical applications of physics and engineering knowledge to medicine. Finally, helpful references to specialised texts, recent review articles, and relevant scientific journals are provided at the end of each chapter, making this an ideal textbook for a one-semester course in medical imaging.

Multimodality Imaging in Cardiovascular Medicine

This book provides a lucid summary of modern multislice CT imaging of the abdomen, with a focus on the essential imaging findings. After a concise technical introduction, the most important abdominal diseases are described and illustrated with high-quality images. Sections are devoted to the liver and biliary system, the pancreas and spleen, the kidneys and urogenital system, and the bowel and peritoneal cavity. Throughout, key differential diagnostic features are highlighted. The editorial team is composed of internationally renowned radiologists from Europe and the United States, and all chapters have been written by recognized experts in the topic under consideration. Multislice CT of the Abdomen will serve as an excellent reference for radiologists participating in further professional training and will prove an ideal source of information for all who wish to deepen their personal knowledge of the subject.

Fundamentals of Medical Imaging

Multidetector-row CT has dramatically improved the results of computed tomography in all clinical applications, but its beneficial impact has been most striking in vascular imaging. The simplicity of acquisition and the wide availability of equipment make this modality especially suitable for routine clinical application. In this book the basic aspects of multidetector-row CT angiography are comprehensively reviewed. Individual chapters are included on technical principles, image processing techniques and contrast agent administration. All clinical applications are then discussed in depth, with lucid descriptions of the examination technique for particular clinical indications and of the findings that characterize specific diseases. Limitations and advantages in comparison with other imaging modalities are considered. A large number of high-quality black and white and color illustrations help to explain the clinical findings.

Medical Imaging

This book constitutes the refereed proceedings of the Second International Workshop on Machine Learning in Medical Imaging, MLMI 2011, held in conjunction with MICCAI 2011, in Toronto, Canada, in September 2011. The 44 revised full papers presented were carefully reviewed and selected from 74 submissions. The papers focus on major trends in machine learning in medical imaging aiming to identify new cutting-edge techniques and their use in medical imaging.

Radiation Detectors for Medical Applications

This book provides structured up-to-date information on all routine protocols used for multislice (multidetector row) CT. The volume contains a detailed technical section and covers the prevailing investigations of the brain, neck, lungs and chest, abdomen with parenchymal organs and gastrointestinal tract, the musculoskeletal system and CTA as well as dedicated protocols for the heart. Separate chapters address the how-to of CT-guided interventions such as punctures, drainages, and therapeutic approaches. Each protocol is displayed en bloc, enabling rapid appreciation of indications and the necessary scanner settings. The second edition includes contributions by renowned experts in the field, who not only provide their clinical experience on each topic, but also give guidelines for indications, workflow, postprocessing and reconstruction algorithms.

Introduction to Medical Imaging

This book considers in depth all the factors that influence the radiation dose and the risk associated with MDCT in children and adults. Only a small proportion of referring clinicians, radiologists, and technologists are aware of both the radiation

risks and their underlying mechanisms. The book proposes detailed guidelines for optimization of the radiation dose when using MDCT. It is written by experts of international standing.

Multislice CT: A Practical Guide

Multidetector-Row CT Angiography

Imaging of the Spine—an exhaustive, full-color reference—combines the ease of use of an atlas with the comprehensive coverage of a definitive reference work. Renowned experts Drs. Thomas P. Naidich, Mauricio Castillo, Charles Raybaud, James G. Smirniotopoulos, Soonmee Cha, and Spyros Kollias cover every aspect of spine imaging, including the latest diagnostic modalities, interventional techniques, and image-guided procedures through over 1300 digital quality illustrations. View 1300 digital quality images of both radiographic images and cutting edge modalities—MR, multislice CT, ultrasonography, and nuclear medicine. Consult the expertise of a diverse group of experts from around the globe on the imaging of the spine. Tap into comprehensive coverage that includes diagnostic and therapeutic options, with an emphasis on cost-effective imaging. Find information quickly and easily thanks to consistent and tightly focused chapters, a full color design, and key points boxes.

Computed Tomography & Magnetic Resonance Imaging Of The Whole Body E-Book

This book is specifically designed to meet the needs of practicing radiologists by offering a practical, unified approach to PET-CT. It details how to effectively apply PET-CT in patient management. Written by radiologists who fully appreciate and understand both PET and CT, the book details an integrated understanding of PET-CT as a combined modality. Clinical topics include PET-CT of thoracic malignancies, melanoma, and breast cancer. In addition, the book reinforces fundamental concepts, such as the role of imaging diagnosis in disease management.

MDCT Physics: The Basics

"This book provides a comprehensive overview of machine learning research and technology in medical decision-making based on medical images"--Provided by publisher.

Medical Imaging Systems Technology: Modalities

The thoroughly revised, updated Fourth Edition of this classic reference provides authoritative, current guidelines on chest imaging using state-of-the-art technologies, including multidetector CT, MRI, PET, and integrated CT-PET scanning. This edition features a brand-new chapter on cardiac imaging. Extensive descriptions of the use of PET have been added to the chapters on lung cancer, focal lung disease, and the pleura, chest wall, and diaphragm. Also included are recent PIOPED II findings on the role of CT angiography and CT venography in detecting pulmonary embolism. Complementing the text are 2,300 CT, MR, and PET scans made on the latest-generation scanners.

Multislice CT

Leading clinicians and researchers from around the world review the full scope of current developments, research, and scientific controversy regarding the principles and applications of cardiac CT. Richly illustrated with numerous black-and-white and color images, the book discusses the interpretation of CT images of the heart in a variety of clinical, physiological, and pathological applications. The authors emphasize current state-of-the-art uses of CT, but also examine developments at the horizon. They also review the technical basis of CT image acquisition, as well as tools for image visualization and analysis.

CT and MR Imaging of the Whole Body

Multi-slice and Dual-source CT in Cardiac Imaging

With contributions by numerous experts

Multidetector-Row CT of the Thorax

Written by the chief physicist at Johns Hopkins University Hospital, this easy-to-read short textbook explains the physics behind multi-detector CT technology, particularly newer, more complex technology. The focus is on principles of physics, effects of scan parameters on image quality, and optimum radiation dosage. The book includes numerous key points summaries and questions to assist in exam preparation.

Spiral and Multislice Computed Tomography of the Body

This book constitutes the refereed proceedings of the Third International Workshop on Machine Learning in Medical

Imaging, MLMI 2012, held in conjunction with MICCAI 2012, in Nice, France, in October 2012. The 33 revised full papers presented were carefully reviewed and selected from 67 submissions. The main aim of this workshop is to help advance the scientific research within the broad field of machine learning in medical imaging. It focuses on major trends and challenges in this area, and it presents work aimed to identify new cutting-edge techniques and their use in medical imaging.

Physics for Diagnostic Radiology, Third Edition

This scholarly set of well-harmonized volumes provides indispensable and complete coverage of the exciting and evolving subject of medical imaging systems. Leading experts on the international scene tackle the latest cutting-edge techniques and technologies in an in-depth but eminently clear and readable approach.Complementing and intersecting one another, each volume offers a comprehensive treatment of substantive importance to the subject areas. The chapters, in turn, address topics in a self-contained manner with authoritative introductions, useful summaries, and detailed reference lists. Extensively well-illustrated with figures throughout, the five volumes as a whole achieve a unique depth and breath of coverage.As a cohesive whole or independent of one another, the volumes may be acquired as a set or individually.